

Work Order ID 144817

Monday, April 25, 2016 1:42:09 PM

144817

Page 1

Item ID: D3011-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Rappel Slide Bar

Start Date: 4/25/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/26/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MCJ Date: APR 25 2016

Tooling:

Date:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3011

C

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut Blanks: 26.625"

6 0

DAS
44
9-89

16-04-25

110

0.86

110

HAAS CNC VERTICAL MACHINING #1

HAAS I

Memo

3.24

HAAS CNC vertical machine #1

Machine as per folio FA129

Folio Rev: AADwg Rev: C

6

DAS
44
9-89

16/05/03

***ENSURE SURFACES ARE SMOOTH, BUFF ALL SCRATCHES AS
REQUIRED AS PER NOTE 11 DWG D3011***

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

Work Order ID 144817

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Page 2

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.06

Quality Control

60- 16/05/02

DAS

44

9-89

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.12

Quality Control

60- 16/05/06

DAS

14

9-89

131

Memo

0.00

131

Outsource2

0.00

Outsource process - NDT

1- LPI AS PER ASTM 1417 LEVEL 2 AS PER DWG D3011
2- Certificate of conformity is required

60- MAY 12 2016

DAS

13

9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval			
Root Cause		FAULT CATEGORY									
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

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Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

132

Receive & Inspect for Damage & Mat'l Certs

0.00

132

Packaging

Memo

0.12

Packaging

6 MAY 12 2016

DAS
13
9-89

135

QC5- Inspect part completeness to step on W/O

0.00

135

QC

Memo

0.12

Quality Control

⑥ 16-05-12 PD

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.36

Hand Finishing

6x d ell 16/03/12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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		OTHER : ☐							

Work Order ID 144817

Monday, April 25, 2016 1:42:09 PM

144817

Page 4

Item ID: D3011-1

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N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Rappel Slide Bar

Stop ***NS2***

Start Date: 4/25/2016 Start Qty: 6.00 ***6***

Cust Item ID:

Required Date: 4/26/2016 Req'd Qty: 6.00 ***6***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M134631</i> Memo START TIME: <i>1:10</i> OVEN TEMPERATURE: <i>320°</i> FINISH TIME: <i>1:40</i>	0.00 0.30				<i>6</i>	<i>0</i>	<i>160516.238</i>	
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.06				<i>6</i>		<i>160516.238</i>	DAS 38 9-89 <i>160516</i>
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <i>SB374</i> Memo	0.00 0.06				<i>6</i>		<i>160516.238</i>	DAS 6 9-89 MAY 17 2016

Work Order ID 144817

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144817

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Accept

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Start Date: 4/25/2016 Start Qty: 6.00

6

Cust Item ID:

Required Date: 4/26/2016 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.60

Quality Control

MCS MAY 18 2016

Picklist Print

Monday, April 25, 2016 1:42:15 PM

Page 1

Work Order ID: 144817

144817

Parent Item: D3011-1

D3011-1

Parent Item Name: Rappel Slide Bar

Start Date: 4/25/2016

Required Date: 4/26/2016

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP C02.05.09Added D6202 at step 2NG

IPP Rev:D Added QC8 JLM Verified By:EC

REV:E 13.06.26 AS PER DWG REV.C DD VERF:JFS

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6202		Manufactured	No			110	f	29.8700	2.1666	13.68379			
D6202													
I-Beam Extrusion													

**

DAS
44
9-89

16-04-25

Location

Loc Qty

Loc Code

MAT028

29.87

X115132

4.87

140205

25

4.87

9.07

144817

DART AEROSPACE LTD	Work Order: <i>144817</i>
Description: Rappel Slide-Bar	Part Number: D3011-1
Inspection Dwg: D3011-1 Rev: C	Page 1 of 1

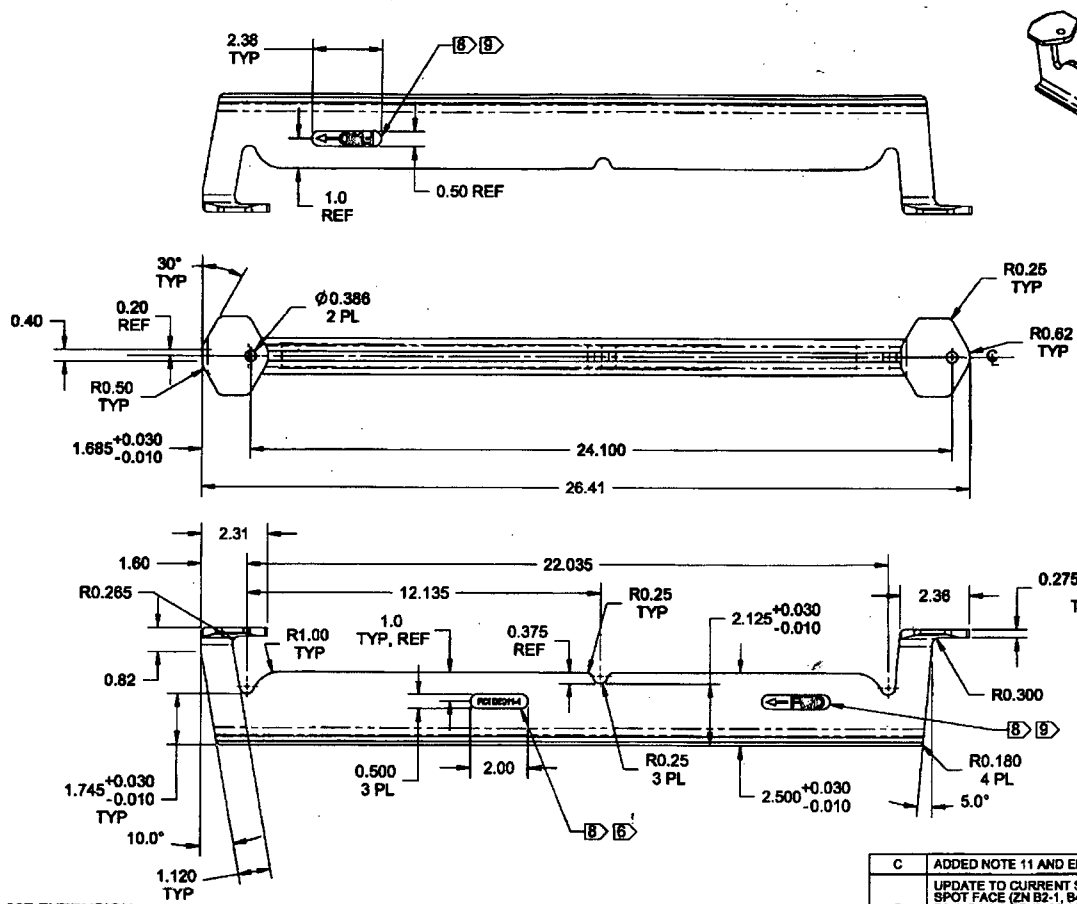
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
26.41	+/-0.030	26.39	✓		Tape	FK-05
2.31	+/-0.030	2.305	✓		Vern	FK-04
2.36	+/-0.030	2.365	✓		"	"
1.120	+0.030/-0.010	1.122	✓		MIP-04	Vern
1.685	+0.030/-0.010	1.685	✓		Vern	FK-04
1.745	+0.030/-0.010	1.758	✓		MIP-04	Vern
1.250	+0.030/-0.010	1.245	✓		"	"
2.500	+0.030/-0.010	2.502	✓		↓	↓
2.125	+0.030/-0.010	2.135	✓		↓	↓
0.275	+0.030/-0.010	0.284	✓		↓	↓
0.375	REF	0.368	✓		↓	↓
Ø0.386	+0.006/-0.001	.386	✓		Vern	FK-04

Measured by: <i>MIP</i>	Audited by: <i>14</i>	Preliminary Approval:
Date: <i>16/05/02</i>	Date: <i>16/05/06</i>	Date:

Rev	Date	Change	Revised by	Approved
A	09.05.04	New Issue	KJ/DD	
B	09.09.14	Dimensions revised per Dwg Rev B	KJ	
C	13.07.18	Dwg Rev updated	KJ	<i>[Signature]</i>

8 7 6 5 4 3 2 1



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 14817 MLC

RELEASED
R 2013-06-25

- NOTES:
- 1) MATERIAL: MANUFACTURE FROM D6202-027 EXTRUSION
 - 2) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: ENGRAVE P/N IN THIS AREA AS SHOWN (NEAR SIDE ONLY) TO MAX
DEPTH OF 0.015 IN 0.19 HIGH LETTERS WITH A MIN RADIUS TOOL OF 0.015
 - 7) WEIGHT: 3.00 lbs
 - 8) SPOT FACE MAX DEPTH OF 0.010 PRIOR TO MARKING
 - 9) ENGRAVE "FWD" IN THIS AREA AS SHOWN TO MAX DEPTH OF 0.015 IN
0.38 HIGH LETTERS WITH MIN TOOL RADIUS OF 0.015
 - 10) LPI PER ASTM 1417 LEVEL 2 OR EDDY CURRENT BY AN NAS 410 LEVEL 2 MINIMUM CERTIFIED/QUALIFIED PERSONNEL.
 - 11) ENSURE SURFACES ARE SMOOTH, BUFF ALL NICKS/SCRATCHES/GOUGES AS REQUIRED.

D3011-1 RAPPEL SLIDE BAR

C	ADDED NOTE 11 AND EDDY CURRENT OPTION NOTE 10	SFM	13.05.13
B	UPDATE TO CURRENT STANDARDS; ADD NOTE 8; ADD SPOT FACE (ZN B2-1, B4-1 & D5-1); ADD DIMENSIONS (ZN B3-1, B4-1 & C5-1); 26.41 WAS 26.32 (ZN C4-1); 2.70 WAS 2.70 (ZN B7-1); ADD (+0.030/-0.010) TOLERANCES; ADD LPI (ZN A8-1)	RF	09.07.24
A	NEW ISSUE	CP	01.03.29
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SFM		
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3011	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		RAPPEL SLIDE BAR	NTS
DATE	13.05.13	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES & OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO32321**

Purchase Order Date 5/10/2016

PO Print Date 5/12/2016

Page Number 4 of 5

Order From :
SKYSERVICE
6120 MIDFIELD ROAD
MISSISSAUGA, ONTARIO L5P 1B1
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905-678-5636

Ship To Contact
Ship To Phone
Ship Via: Delivered
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Total: \$0.00

9	144467	D350-748-203 CROSSTUBE	5/12/2016	1.00	\$0.00	\$0.00
---	--------	---------------------------	-----------	------	--------	--------

Yes
5/12/2016

LIQUID PENETRANT INSPECTION AS PER QSI 038 OR
LPI AS PER ASTM 1417 LEVEL 2

Line Total: \$0.00

10	144817	D3011-1 RAPPEL SLIDE BAR	5/12/2016	6.00	\$0.00	\$0.00
----	--------	-----------------------------	-----------	------	--------	--------

Yes
5/12/2016

LIQUID PENETRANT INSPECTION AS PER QSI 038 OR
LPI AS PER ASTM 1417 LEVEL 2

CL 16/05/12

Line Total: \$0.00

11	144493	D4464-041 FUEL TANK	5/12/2016	1.00	\$0.00	\$0.00
----	--------	---------------------	-----------	------	--------	--------

Yes
5/12/2016

LIQUID PENETRANT INSPECTION AS PER QSI 038 OR
LPI AS PER ASTM 1417 LEVEL 2

Note:

5/12/2016

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

DOT APP 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO28223	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: 32321
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT ON 8 CROSSTUBES, 1 FUEL TANK & 6 RAPPEL SLIDE BARS AS PER PO32321

1 FUEL TANK ASSY, ITEM ID# D4464-041, WORK ORDER ID# 144493

6 RAPPEL SLIDE BARS, ITEM ID# D3011-1, WORK ORDER ID# 144817

3 STAINLESS STEEL AFT CROSSTUBES, ITEM ID# D350-748-203, WORK ORDER ID# 144465, 144466, 144467

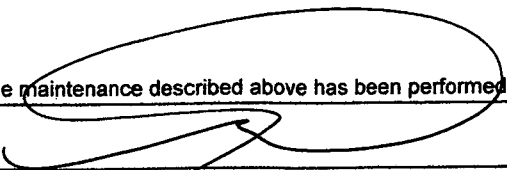
3 STAINLESS STEEL FWD CROSSTUBES, ITEM ID# D350-748-103, WORK ORDER ID# 144404, 144405, 144406

2 FWD CROSSTUBES, ITEM ID# D212-664-101, WORK ORDER ID# 145389, 145390

Action Taken:	Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-13 NO CRACK FOUND PEN. ZL-56, B#14M046, UV M-20141, CLEANER SKC-S #14H01K, DEV. 13M25K	MAY 11 2016	 

Description	Location	P/N	Qty	Batch	S/N Off	S/N On

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature: 	ACA/SCA Stamp 	Date: MAY 11 2016
Name: RAFIK MELIKYAN		